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NOTICE 1
27 August 1997

DEPARTMENT OF DEFENSE
DESIGN MANUAL

INTERIOR DESIGN GUIDE

DM-14.01, dated April 1986, and any subsequent revisions or change notices are inactive for new design and shall be no longer used as a guidance reference for new designs.

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INTERIOR

DESIGN

Criteria & Programmatic Requirements
for Evaluation

DESIGN MANUAL 14.01
APRIL 1986

ABSTRACT

Criteria for interior design are presented for use by professional interior designers. The manual shall be used in developing functional, aesthetically pleasing, economical, and humane interior environments for all Navy and Marine Corps facilities in both new construction and modernization projects. The material is covered in six principal sections: introduction, the design process, scope of interior design services, design criteria, submittals, and supply sources.

FOREWORD

This design manual is one of a series of manuals of standard Naval Facilities Engineering Command (NAFACENGCOM) guidelines. This manual is meant to serve as guidance for personnel developing interior design projects. In addition, the manual can be used by NAVFACENGCOM personnel in formulating programmatic requirements and evaluating interior design.

The information contained in the manual is a compilation of current and proven standards, criteria, and design principles established by NAVFACENGCOM, other Government agencies, and the private sector. This manual uses, to the maximum extent feasible, national professional society, association, and institute criteria in accordance with NAFACENGCOM policy. Recommendations for improvement of these criteria are encouraged from within the Navy and from the private sector and should be furnished on the form provided to Southern Division, Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), 2155 Eagle Drive, Charleston, South Carolina 29411-0068.

This publication is certified as an official publication of the Naval Facilities Engineering Command and has been reviewed and approved in accordance with SECNAVINST 5600.16.

J. P. JONES, JR.
Rear Admiral, CEC, U. S. Navy
Commander

DM Number	Title	PA	Date
DM-14.01	Interior Design	S	Apr 1986
DM-14.02	Carpet Selection Guide	C	Dec 1979

INTERIOR DESIGN

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Section 1: INTRODUCTION

1.1 Purpose. The primary purpose of this manual is to provide criteria for qualified design professionals who prepare and evaluate interior design projects for the Navy and its clients. The manual is intended to support the Navy's objective of integrated facility design: combining input from all design and engineering disciplines and incorporating the designer into the design team from the outset of design development.

1.2 Scope. This manual is applicable to all new military construction program projects and to projects involving conversion or modernization of existing space. While this manual references basic criteria documents for designers, it does not provide all the information required for the successful preparation of project interior design. Supplemental requirements must be obtained through a pre-design conference to determine user needs, design constraints, and opportunities.

1.3 Policy. It is essential to ensure a proper balance of all engineering and design disciplines. Interior design must emphasize cooperation and coordination among all disciplines throughout the design and construction processes. Emphasis shall be placed on producing functional, aesthetically pleasing, cost-effective, and humane interior environments for all Navy and Marine Corps facilities and for the facilities of their clients. Interior design shall be developed by professional designers who have demonstrated an ability to create useful, efficient, and attractive interior environments that are fully integrated with the work of other design and engineering disciplines.

Interior design shall be an integral part of the facility design process and shall encompass two general divisions:

a) Structural-related Segment. This deals with design and color coordination of interior building surfaces, built-in furniture and similar items which are integral or attached to the structure and are funded from military construction appropriations. Structural-related interior design services are applicable to all projects.

b) Furnishings-related Segment. This portion of interior design deals with the design, selection, arrangement, and color coordination of the furniture, furnishings, and accessories. These items are funded from other than military construction appropriations. Furnishings-related interior design is applicable to all facility projects for which furniture is required or for which color coordination of equipment is appropriate.

1.4 Interior Design Quality. Excellence in interior design is a prime goal for all Navy military construction projects. NAVFACENGCOM is committed to this goal and stresses quality design in all projects.

NAVFACENGCOM considers that quality design satisfies all of the following requirements:

- a) Appropriate in design. Interior Design shall be compatible with the facility design and consistent with its function in quality and character.
- b) Efficient in function. Functional requirements shall be met in a manner to permit efficient operation of the facility.
- c) Effective in cost. Furnishings shall be selected on the basis of life-cycle cost. Frills shall be avoided but emphasis shall be placed on seeking value in terms of products that work well, look well, and wear well.
- d) Fully coordinated. The interior design shall be thoroughly coordinated so that change orders due to design errors are minimized.
- e) Adaptable in purpose. Over the life of a facility, changes are inevitable. Interior design shall support change without undue expense.
- f) Easily maintainable. Furnishings and finishes shall be selected for low maintenance to reduce operating costs and life-cycle costs.
- g) Attainable. Furnishings shall be readily available from established sources and selected to ensure that the required products can be acquired in accordance with procurement regulations.

The Navy is a multi-faceted client. The actual user of the facility will be an activity which is part of a systems command. A base or area public works center may also be involved. NAVFACENGCOM, as shore facilities design and construction agent for the Navy and occasionally for the Air Force and other agencies, will coordinate design requirements of the user and other command elements with private sector designers.

Most Navy functions are similar to functions found in the private sector (e.g., troop housing is quite similar to a school dormitory or a motel; a maintenance shop or an administration building are much like private buildings serving similar functions). There will, however, be some functional requirements for Navy facilities which may differ from normal practice. These requirements should be delineated clearly either in the project program or in pre-design activity.

The budget is critical. Any significant deviation in anticipated project cost must be surfaced as early as possible so that adjustments in scope or budget can be made. The later in the project this occurs, the less flexibility there is to adjust.

Section 2: DESIGN PROCESS

The Task Flow Chart for Integrated Facility Design, Figure 1, shows the preferred relationship between the interior design process and the preparation of design and construction documents required to insure the professional quality of interior design throughout the design process. The interior design shall:

- a) Be fully integrated with the work of other design and engineering disciplines in all stages of the facility design process.
- b) Commence concurrently with architectural/engineering design services to insure that submittals include the designer's input beginning no later than the schematic design phase.
- c) Include interior signage/graphics in plans and specifications for all buildings.
- d) Include preparation of building interior finish/color boards to facilitate review of color/finish/signage schedules in plans and specifications and for use by the Resident Officer in Charge of Construction (ROICC) in on-site inspection and approval of materials and finishes during construction.
- e) Include post-design review/approval of contractor submittals of structural-related interior design elements by interior design personnel, when required.

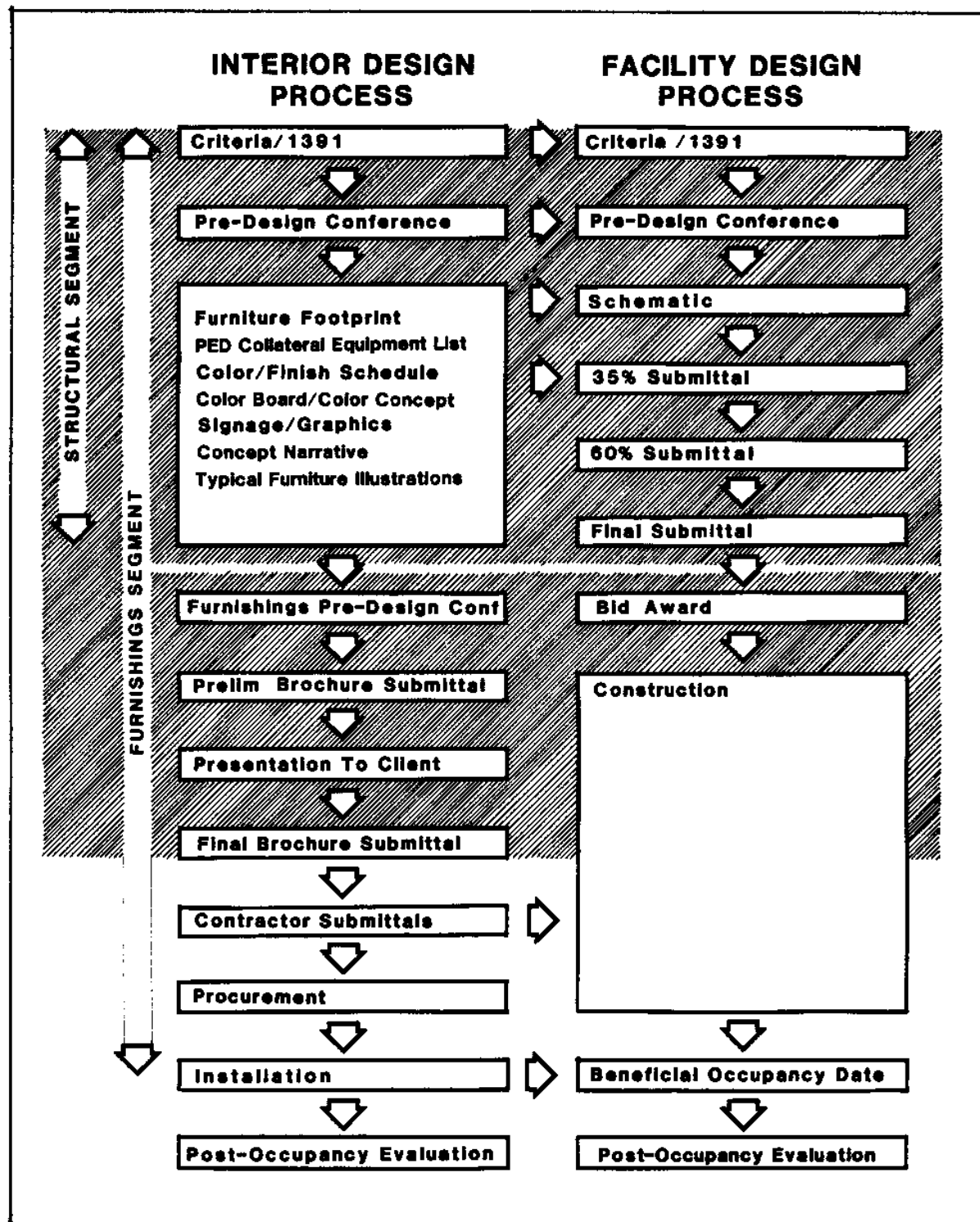


Figure 1
Task Flow Chart for Integrated Facility Design

Figure 1
Task Flow Chart for Integrated Facility Design
14.01-4

Section 3: SCOPE OF INTERIOR DESIGN SERVICES

3.1 Summary. The scope of interior design services listed below and developed in subsequent paragraphs and subparagraphs may include any or all of the following, as appropriate:

- a) Space Planning (Subparagraph 3.2.1);
- b) Lighting (Subparagraph 3.2.2);
- c) Interior Details (Subparagraph 3.2.3);
- d) Color/Finish Selection/Coordination (Subparagraph 3.2.4);
- e) Outdoor Furniture and Equipment (Subparagraph 3.2.5);
- f) Budgeting/DD Form 1391 (Subparagraph 3.2.6);
- g) Collateral Equipment List (Paragraph 5.4);
- h) Furniture Footprint (Paragraph 5.5);
- i) Interior Signage (Paragraph 5.6);
- j) Furniture Selection (Paragraph 5.7);
- k) Furniture Placement Plans (Paragraph 5.8);
- l) Procurement Data Sheets (Paragraph 5.9);
- m) Color Boards (Paragraph 5.10);
- n) Brochures (Paragraph 5.11);
- o) Waivers/Performance Specifications (Paragraph 5.12 and Subparagraph 6.6.3);
- p) Follow-up/Supervision/Evaluation (Paragraph 5.13).

3.2 Key Considerations.

3.2.1 Space Planning. Space is defined through manipulation of elements: walls, ceilings, floors, furnishings, or color within the building envelope. The primary goal of space planning is to convert functional program requirements into a workable, aesthetically stimulating environment. Important space planning considerations are listed below.

3.2.1.1 Functional Relationships. Spaces shall be grouped to afford compatibility of activities, circulation, and service requirements. Essential adjacency relationships shall be established by evaluating the interaction of people and activities and the flow of materials between one space and another.

3.2.1.2 Circulation Flow. A convenient and workable circulation flow shall be established and correspond with the layout of space adjacencies. Circulation systems shall be capable of safely and comfortably handling routine peak loads as well as those that might be experienced in an emergency situation such as evacuation of the building.

3.2.1.3 Flexibility. The need for future expansion/contraction of space, as well as the need for daily internal functional changes and multi-use, shall be considered.

3.2.1.4 Visual control. Spaces requiring surveillance and visual control shall be organized to allow supervision of activities from a central area.

3.2.1.5 Privacy. Conditions which require private, semi-private, or group privacy shall be met by the use of screens, dividers, or partitions as specific needs dictate.

3.2.1.6 Sound Level Compatibility. Spaces shall be arranged to separate high noise areas from low noise areas. The space planner shall determine the type of response a room makes to sounds generated within and shall select reflective or absorptive surfaces and furnishings that either reinforce or reduce the sounds. Sound reduction between spaces through acoustical treatment, shielding, isolation, or distance shall also be considered.

3.2.1.7 Economy of Structure. A standard space module shall be used which is efficient and economical for the layout of the structure. This includes ceiling and wall systems, lighting and air handling equipment, and the layout of furnishings.

3.2.1.8 Fire-resistant Construction. Organize spaces requiring fire-resistant construction and extinguishing systems in localized areas to minimize the requirements for resistant construction.

3.2.1.9 Environmental Support Systems. Spaces shall be organized into comfort zones where different lighting and heating, ventilating and air conditioning (HVAC) may be required. Similarly, spaces requiring plumbing services shall be organized to minimize pipe runs.

3.2.1.10 Communications Systems. The provision and location of telephones, intercommunication systems, and central television systems (where required) must be provided as part of the building design and shall be coordinated as a space planning function.

3.2.1.11 Image. The role of the organization and the need to express that image are important. Furthermore, the building interior shall reflect its function and present the proper organizational image.

3.2.2 Lighting. Lighting design begins with consideration and determination of the required illumination for a specific space or task and must evolve simultaneously with the spatial and functional development of the interior. Good lighting can help orient and direct people in a building, support traffic patterns, prevent accidents by eliminating glare and disorientation, illuminate exit signs, indicate traffic paths, and identify important features such as exits and fire extinguishers. The type and quality of light used will have a great influence on the colors used, thus affecting the physical appearance of the building interiors. Well designed lighting resulting in good color rendition will have a positive effect on users, both physically and psychologically.

Recent energy conservation initiatives have changed lighting design philosophy. More emphasis has been placed on light quality and fixture placement than on the quantity of light. Quality light achieves variety and interest by reducing overall brightness, by diminishing veiling reflection and glare, and through contrasting light levels.

Daylight has become an increasingly important part of interior design where energy conservation often mandates minimum energy usage. Energy conservation directives suggest that lighting be controlled by two-level switching; therefore, the designer shall consider the reduced lighting levels when specifying the colors used in each space.

3.2.3 Interior Details. Interior details shall be carefully coordinated in conjunction with an overall interior design. Items which are part of the building construction contract shall be coordinated with related furnishings and equipment to be procured separately by the user. The interior wall systems, doors, counters, built-in furniture, blinds, signage, lighting, and other features shall be carefully considered in this regard.

3.2.4 Color/Finish Selection/Coordination. The designer shall select interior finishes appropriate for the design function of the building and interior space. Selection of materials and finishes shall also satisfy aesthetic requirements. Additionally, the designer shall consider product availability with reference to geographical area and shall consider the anticipated use, life-cycle cost, fire and safety requirements, maintenance, comfort, and sound control. The color, texture, and pattern of materials shall complement the overall building design. Color shall be used to stimulate positive human physical and emotional reactions and to enhance the overall function of the building. Color/finish schedules, as well as interior details and elevations, shall coordinate building features with related furnishings and equipment. and shall be prepared as a part of the construction documents. The construction specifications shall be consistent with and coordinated with the contract drawings. The specifications shall require submittals of key color/finish items to the Resident Officer in Charge of Construction (ROICC) for approval to assure design control throughout construction.

3.2.5 Outdoor Furniture and Equipment. In conjunction with the landscape design, appropriate furniture and equipment such as trash receptacles, tables, and seating may be required.

3.2.6 Budgeting/DD Form 1391.

3.2.6.1 Budgeting. The Navy uses two different procurement systems to obtain interior design elements. Interior finishes, signage, built-in furnishings, casework and like items are procured under the construction contract using military construction funds and are specified in the construction documents. Moveable furniture and equipment are funded from appropriations other than military construction and are referred to as collateral equipment.

As part of the interior design process, it is the responsibility of the designer to see that budget estimates are updated throughout design development. It is further the responsibility of the designer to see that the final interior design furnishings package is within the established budget.

1. COMPONENT NAVY		FY 19 <u>81</u> MILITARY CONSTRUCTION PROJECT DATA			2. DATE 15 MAY 83	
3. INSTALLATION AND LOCATION CHARLESTON NAVAL SHIPYARD CHARLESTON, SOUTH CAROLINA				4. PROJECT TITLE ADMINISTRATIVE OFFICE		
5. PROGRAM ELEMENT		6. CATEGORY CODE	7. PROJECT NUMBER		8. PROJECT COST (\$000)	
		61D-10	P-074		\$1,800	
9. COST ESTIMATES						
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)	
ADMINISTRATIVE OFFICE		SF	26,230	49.82	1,307	
BUILDING		SF	26,230	37.21	(976)	
BUILT-IN EQUIPMENT		LS	-	-	(331)	
SUPPORTING FACILITIES		-	-	-	309	
SPECIAL CONSTRUCTION FEATURES		LS	-	-	(47)	
ELECTRICAL UTILITIES		LS	-	-	(112)	
MECHANICAL UTILITIES		LS	-	-	(21)	
ROADS, PARKING, SIDEWALK		SY	4,700	13.40	(63)	
SITE IMPROVEMENTS		LS	-	-	(38)	
DEMOLITION		LS	-	-	(28)	
SUBTOTAL		-	-	-	1,616	
CONTINGENCY (5%)		-	-	-	81	
TOTAL CONTRACT COST		-	-	-	1,697	
SUPERVISION, INSPECTION & OVERHEAD (5.5%)		-	-	-	93	
TOTAL REQUEST		-	-	-	1,790	
TOTAL REQUEST (ROUNDED)		-	-	-	1,800	
EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS		-	-	-	(215)	
10. DESCRIPTION OF PROPOSED CONSTRUCTION						
<p>11. REQUIREMENT: _____ SF ADEQUATE _____ SF SUBSTANDARD: _____ SF</p> <p>PROJECT:</p> <p>REQUIREMENT:</p> <p>CURRENT SITUATION:</p> <p>IMPACT IF NOT PROVIDED:</p> <p>ADDITIONAL:</p>						

DD FORM 1391
1 DEC 76

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Figure 2
Example DD Form 1391

Figure 2
Example DD Form 1391

14.01-8

3.2.6.2 DD Form 1391. The DD Form 1391 (see Figure 2) is a programming and budgeting document which supports a military construction project. Item 9 on DD Form 1391 contains a non-add item for "Equipment Provided from Other Appropriations." This line item shall include the total cost of collateral equipment that is essential to the mission of the facility. DD Form 1391c shall provide detailed information and the estimated cost of the furniture and equipment. Instructions for preparing the 1391 and 1391c are found in NAVFAC Instruction 11010.32, Preparation of Supporting Documents for MILCON Program Projects and NAVFAC Instruction 11010.14, Project Engineering Documentation (PED) for Proposed Military Construction Projects.

3.2.7 Fire Protection. Fire protection must be a consideration of the interior designer. The designer manipulates geometry, fuel, and ventilation throughout the design process and specifies a variety of otherwise unregulated building furnishings and contents. The height of a room and its volume; the type, quantity, and distribution of furnishings; flame spread factors; and the type of finish materials on the walls, floors, and ceiling can have significant effects on the intensity of a fire.

To deal effectively with life safety and fire protection, to cooperate and co-design with the help of fire protection engineers, and to incorporate fire protection early in the design process, the designer must be knowledgeable of the issues, vocabulary, concepts, and approaches relevant to the fire phenomena.

3.2.8 Provisions for the Physically Handicapped. Meeting the requirements of the handicapped involves many interior features, details and furnishings. Examples include the design of entrances, doorways, stairways, ramps, corridors and circulation spaces, floors, hardware and handrails, counters, signage, and furnishings. Chapter 18 of DOD 4270.1-M, Construction Criteria manual, provides barrier-free criteria for military facilities.

Section 4: DESIGN CRITERIA

4.1 References. In addition to a thorough understanding of the interior design process, a knowledge of the criteria by which the, Naval Facilities Engineering Command (NAVFACENGCOM) accomplishes its mission is also necessary. A listing of those pertinent to interior design follows:

4.2 Department of Defense (DOD), Navy Comptroller (NAVCOMPT), and Chief of Naval Operations (OPNAV). The following are DOD, NAVCOMPT, AND OPNAV design criteria which relate to interior design:

- a) DOD Instruction 4165.43. Provision of Furnishings in Personnel Quarters provides DOD policy and procedures for providing furniture in Government quarters.

- b) DOD Instruction 5305.6. Department of Defense Office Furniture Standards for the National Capital Region prescribes office furniture use standards for the National Capital Region

- c) DOD Manual 4270.1-M, Construction Criteria provides basic criteria for space allocations, color/finishes, carpeting, and accessibility criteria for the physically handicapped.

- d) Military Handbook (MIL-HDBK)-1008. Fire Protection for Facilities Engineering Design. and Construction provides guidance for interior design features to limit fire spread and provides fire protection criteria for interior finish materials.

- e) NAVCOMPT Manual. Volume 7. Budgeting assigns NAVFACENGCOM responsibilities for the Collateral Equipment Program associated with initial outfitting of military construction projects.

- f) OPNAV Instruction 11101.32. Provision of Furnishings for Family and Bachelor Housing sets forth policy, establishes responsibilities and delegates authority to NAVFACENGCOM for approval of furniture for personnel quarters, including family housing, Bachelor Enlisted Quarters (BEQ), and Bachelor Officers Quarters (BOQ).

- g) OASD Memorandum of 13 Nov 1984, Subject Joint Criteria for Child Care Centers provides general guidelines for design and space planning of facilities to service children ranging in age from infants to pre-teens.

4.3 NAVFACENGCOM Instructions. The following are NAVFACENGCOM design criteria:

- a) NAVFAC Instruction 11010.14. Project Engineering Documentation (PED) for Proposed Military Construction Projects provides information for developing a preliminary budget estimate and a list of furniture and equipment (Collateral Equipment List) for proposed military construction projects.

- b) NAVFAC Instruction 11010.32. Preparation of Supporting Documents for MILCON Program Projects provides that furniture and equipment essential to the mission of the facility shall be programmed and supported on the DD Forms 1391 and 1391c.

- c) NAVFAC Instruction 11010.74. Collateral Equipment Required to Initially Outfit Military Construction. Navy and Military Construction. Naval Reserve Projects provides procedures and guidance for administration of the Collateral Equipment Program associated with initial outfitting of military construction projects.

d) NAVFAC Instruction 11012.119, Preparation of Concept Plans and Final Working Drawings and Specifications for Medical/Dental Facilities provides for full integration of interior design with other design and engineering disciplines at all stages of the design process and defines submittals required for medical/dental facilities.

4.4 NAVFACENGCOM Design Manuals and P-Publications. The manuals and publications listed below present design criteria for the construction, maintenance, modernization and rehabilitation of Navy facilities.

a) DM-1.02. Materials and Building Components along with other manuals in this series supersedes, in part, NAVFAC DM-1, Architecture. This publication includes general criteria for selection of interior materials and building components. Emphasis is placed on compliance with Navy standards and project requirements for function, maintenance, and cost.

b) DM-1.03. Architectural Acoustics also supersedes, in part, NAVFAC DM-1, Architecture, and provides practical solutions to common acoustical problems. Contents include basic acoustical information, noise sources and treatment, and criteria for proper acoustical design for rooms.

c) DM-14.02. Carpet Selection Guide provides background information and standards for selection and installation of carpet.

d) DM-33.01. Medical Facilities Preliminary Design Considerations provides general information on types of medical facilities and major space planning considerations for different hospital zones.

e) DM-33.02. Naval Hospitals Design and Construction Criteria provides guidelines for selection of interior architectural finishes and materials, furnishings, and signage/graphics systems.

f) DM-33.03. Medical Clinics and Dental Clinics Design and Construction Criteria provides guidelines similar to DM-33.02 but specifically for medical and dental clinics.

g) DM-34. Administrative Facilities provides very basic design guidance for administrative facilities and refers the designer to more definitive guidance contained in other publications.

h) DM-36.01, Unaccompanied Personnel Housing provides general design guidance for unaccompanied personnel housing, which includes bachelor enlisted and officers quarters, and enlisted personnel dining facilities.

i) DM-36.02. Unaccompanied Enlisted Quarters provides guidance in addition to DM-36.01 for designing and furnishing bachelor enlisted quarters.

j) DM-36.03, Unaccompanied Officers Quarters provides guidance for designing and furnishing bachelor officer quarters.

k) DM-37.03 Outdoor Sports and Recreation Facilities provides guidance for recreational facilities.

l) DM-37.05. Family Service Centers provides prototypical designs, functional zoning diagrams, and individual space requirements.

m) DM-37.06, Chapels and Religious Educational Facilities provides detailed and specific guidance on selection, specification, and procurement of furniture, artifacts, and symbolic devices.

n) DM-50. NAVFAC Index to Engineering and Design Criteria provides a comprehensive index to Navy engineering and design criteria.

o) NAVFAC P-34, Engineering and Design Criteria for Navy Facilities presents a current listing of NAVFACENGCOM guide specifications and the federal, military, and special specifications and standards referenced in those guide specifications.

p) NAVFAC P-309. Color for Naval Shore Facilities provides guidance for interior and exterior color selection and usage for naval shore facilities. Also included in this publication are: mandatory color standards for machinery, vehicles and equipment; safety colors; and colors for traffic controls and signs.

q) NAVFAC P-442. Economic Analysis Handbook provides guidance which can be used in economic analyses for building finish selections and furnishings using the life-cycle cost principles.

4.5 NAVFACENGCOM Guide Specifications. Preparation of construction contract documents require the use of NAVFACENGCOM Guide Specifications (NFGS) Series, formerly "TS" Series. These guides shall be edited to assure the specification conforms to the drawings and to provide for submittals to control construction quality. A list of guide specifications of interest to the designer can be found in NAVFAC P-34. Some examples are listed below.

Examples:	NFGS-01400	Contractor Quality Control System
	NFGS-01401	Contractor Inspection System
	NFGS-04200	Unit Masonry
	NFGS-04250	Ceramic Glazed Structural Clay Facing Tile and Prefaced Concrete Masonry Units
	NFGS-06200	Finish Carpentry
	NFGS-08110	Hollow Metal Doors and Frames
	NFGS-08120	Aluminum Doors and Frames
	TS-08210	Wood Doors
	NFGS-08371	Aluminum Sliding Glass Doors
	TS-08510	Steel Windows
	NFGS-08520	Aluminum Windows
	TS-08610	Wood Windows
	NFGS-08710	Finish Hardware
	NFGS-08800	Glazing
	NFGS-08900	Glazed Curtain Wall System
	NFGS-09150	Plastering and Stuccoing
	NFGS-09215	Veneer Plaster
	NFGS-09250	Gypsum Board
	NFGS-09310	Ceramic Tile, Quarry Tile, and Paver Tile
	NFGS-09331	Chemical -Resistant Quarry Tile Flooring
	NFGS-09411	Terrazzo, Bonded to Concrete
	NFGS-09500	Acoustical Treatment
	NFGS-09561	Gymnasium-Type Hardwood Strip Flooring Systems
	NFGS-09563	Portable (Demountable) Wood Flooring
	NFGS-09570	Wood Parquet Flooring
	NFGS-09650	Resilient Flooring
	TS-09661	Vinyl Composition Tile on Concrete
	NFGS-09666	Institutional Sheet Vinyl Flooring
	TS-09670	Fluid Applied Resilient (Resinous) Flooring
	NFGS-09682	Carpet
	NFGS-09690	Carpet Tile
	NFGS-09815	High-Build Glaze Coatings
	NFGS-09910	Painting of Buildings (Field Painting)
	NFGS-09951	Vinyl-Coated Wall Covering
	NFGS-10152	Hospital Cubicle Track

NFGS-10162	Toilet Partitions
NFGS-10270	Access Flooring
NFGS-10440	Signs
TS-10623	Accordion Folding Partitions
NFGS-10800	Toilet and Bath Accessories
NFGS-11701	Casework, Metal And Wood (Medical and Dental)
NFGS-12322	Wardrobes
NFGS-12331	Prefabricated Vanities
NFGS-12332	Wardrobe storage Cabinets
TS-12391	Kitchen cabinets (and Vanity Cabinets)
NFGS-12510	Blinds, Venetian (and Audio Visual)
NFGS-12540	Draperies
NFGS-12711	Theater Seating

4.6 Federal Standard 595a. Colors. This standard provides small reference chips of colors currently used by the Government.

4.7 Military Specifications. Specifications for furnishings used primarily for personnel living in bachelor enlisted quarters are:

- a) MIL-B-15228F, Bed, Bunk, Steel, Round Tube, Single and Double Deck (Convertible Type);
- d) MIL-B-28635B(YD), Bookshelf for Bunk Bed;
- g) MIL-B-28644, Bed, Bunk, Steel, Square Tube, with End Panels, Single and Double Deck;
- b) MIL-C-28580(1)(YD), Cabinet, storage, Wardrobe, Three Drawer;
- f) MIL-D-28637A(YD), Desk, Flat Top with Bookshelf;
- h) MIL-L-28583(YD), Light, Bed, Flexible Arm, Heavy Duty.
- e) MIL-P-28636A(YD), Panel for Bunk Bed;
- c) MIL-W-28581A(YD), Wardrobes, Clothing, Composite Wood and Metal;

Section 5: SUBMITTALS

5.1 Requirements. All interior design submittals shall be clear, complete, and organized to facilitate an orderly review. All narrative data shall be clearly written and well organized. Submittals shall be cross-referenced to the construction plans and specifications. All interior design submittals shall be presented in multi-ring binders of nominal 8-1/2 x 11 inch size.

5.2 Submittal Stages. The designer shall fully integrate interior design submittal data with contract plans and specifications and shall submit the material described hereafter in Paragraph 5.3. Depending upon the building type and the project schedule, the submittal requirements may vary from project to project. For example, when a Schematic Submittal is a requirement of the project scope, the furniture footprint shall be included in the Schematic Submittal instead of the 35% Submittal. As shown in Figure 1, the submittal of interior design material shall interface with the facility design/construction schedule. Actual procurement of furnishings is normally dependent on the Beneficial Occupancy Date (BOD) of the facility and not the facility design schedule. This will vary among projects depending on the funding cycle, construction period, and availability of storage for the furniture.

5.3 Submittal Contents.

5.3.1 Structural -related Segment.

5.3.1.1 Schematic Submittal of Contract Documents.

Furniture Footprint (Paragraph 5.5).

5.3.1.2 35% Submittal of Contract Documents:

- a) Updated Furniture Footprint;
- b) Collateral Equipment List (Paragraph 5.4);
- c) Color/Finish Schedule (Subparagraph 3.2.4);
- d) Interior Signage Concepts (Paragraph 5.6);
- e) Color Boards (Paragraph 5.10).

5.3.1.3 100% Submittal of Contract Documents:

- a) Updated Color/Finish Schedule;
- b) Updated Interior Signage;
- c) Updated Color Boards.

5.3.2 Furnishings-related Segment.

5.3.2.1 Preliminary Brochure:

- a) Concept Narrative (Paragraph 5.11a);
- b) Color Boards (Paragraphs 5.10 and 5.11b);

- c) Furniture Illustrations (Paragraphs 5.9 and 5.11c);
- e) Furnishings Source List and Cost Estimate (Paragraph 5.11e);
- f) Furniture Placement Plans (Paragraphs 5.8 and 5.11f);
- g) Color Reproductions of Graphics/Art Work (Paragraph 5.11g);
- h) Color/Finish Schedules (Subparagraph 3.2.4 and Paragraph 5.11h);
- i) Sketches (Paragraph 5.11i).

5.3.2.2 Final Brochure:

- a) Updated Preliminary Brochure;
- b) Procurement Data Sheets (Paragraph 5.9);
- c) Updated Furniture Placement Plans (Paragraphs 5.8 and 5.11f);
- d) Waivers/Performance Specifications (Paragraphs 5.12, 6.6, and Subparagraph 6.6.3);
- e) Justification for Procurement (Paragraphs 5.12, 6.6, and Subparagraph 6.6.2);
- f. Summary Cost Data.

5.3.2.3 Follow-up/Supervision/Evaluation (Paragraph 5.13).

5.4 Collateral Equipment List. An important programming and budgeting document is the Collateral Equipment List prepared as a part of the 35% Submittal of the construction documents. The importance of the Collateral Equipment List to the designer cannot be overemphasized. A realistic and complete collateral budget shall be developed in conjunction with the building design and space planning effort and shall be coordinated with the Furniture Footprint. The designer shall review both the DD Form 1391 and Collateral Equipment List to insure that all necessary furnishing items are included and that cost estimates are accurate.

a) Enclosure (1) to NAVFAC Instruction 11010.14, Project Engineering Documentation (PED) for Proposed Military Construction Projects, gives guidance for preparing the Collateral Equipment List. An example of a completed list is shown as Figures 3 and 4.

b) The budget for the interior design furnishings package is set by the cost of the items shown in the Collateral Equipment List (See: Item 2. "NON-TECHNICAL EQUIPMENT, Part A. FURNITURE/FURNISHINGS ITEMS (EXPENSES)" of Figure 3).

5.5 Furniture Footprint. A Furniture Footprint to show the end results of the designer's space planning effort shall be submitted with the Schematic or 35% Submittal of contract drawings. While not a final layout, the Furniture Footprint demonstrates the designer's ability to comprehend and plan for the various functions that are to be housed in the facility. The designer shall use standard furniture sizes at this point in design to demonstrate the adequacy of each space and to communicate to other engineering disciplines the utilities and services required for each space. The Furniture Footprint is also used to provide a basis for establishing the Collateral Equipment List for interior furnishings. A Furniture Footprint shall be provided for all paces in projects.

COLLATERAL EQUIPMENT REQUIREMENTS (INITIAL OUTFITTING)					DATE	
ACTIVITY (Name, Location, UIC)					9 Oct 1984	
PROJECT TITLE					UIC: N60201	
MATERIALS LABORATORY					PROJECT NUMBER	CONST BOD
					414	85
COG SYMBOL AND FED. STOCK NO. OR OTHER SOURCE	ITEM/EQUIPMENT DESCRIPTION	QUAN- TITY	UNIT OF ISSUE	UNIT PRICE	TOTAL COST	
1. <u>BUILT-IN EQUIPMENT TO BE MCON FUNDED</u>	Dispenser, water, electric	2	EA	647.00	1,294.00	
	Hardware, drapery	120	LF	5.20	624.00	
	Screen, rear projection	1	EA	883.00	883.00	
	Signage/graphics	1	LS	2,150.00	2,150.00	
	Telephone system	1	LS	9,503.00	9,503.00	
	<u>TOTAL BUILT-IN EQUIPMENT</u>				<u>14,454.00</u>	
	(Each item above includes assoc. markups/installation costs.					
Total escalated 10.9% to anticipated construction contract award date of April 1984.				<u>16,029.47</u>		
2. <u>NON-TECHNICAL EQUIPMENT</u>	...Funded by NAVFACENGCOM...					
	<u>A. FURNITURE/FURNISHINGS ITEMS (EXPENSES)</u>					
	Attachment, desk	8	EA	137.00	1,096.00	
	Desk, single pedestal	8	EA	192.00	1,536.00	
	Chair, typist	8	EA	91.00	728.00	
	Drapery	4	PR	249.00	996.00	
	...Installation	1	LS	60.00	60.00	
	Shelving, storage	21	EA	88.85	1,865.85	
	Sub-total Furniture/Furnishings				6,281.85	
	Contingency - 5%				314.09	
	Escalation (4.8x4.5x4.2%)				931.07	
	<u>TOTAL FURNITURE/FURNISHINGS</u>				<u>7,527.01</u>	
	<u>B. MISCELLANEOUS ITEMS</u>					
	Cleaner, vacuum	1	EA	255.00	255.00	
	File, electric	8	EA	1,600.00	12,800.00	
	Fire extinguisher, 10#, CO2	3	EA	139.91	419.73	
	Sub-total Miscellaneous				13,769.73	
	Contingency - 5%				688.49	
	Escalation (4.8x4.5x4.2%)				1,993.50	
	<u>TOTAL MISCELLANEOUS</u>				<u>16,451.72</u>	
	<u>C. INVESTMENT ITEMS</u>					
	<u>TOTAL NON-TECHNICAL EQUIPMENT</u>				<u>23,978.73</u>	

Figure 3
Example Collateral Equipment List

Figure 3
Example Collateral Equipment List
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COLLATERAL EQUIPMENT REQUIREMENTS (INITIAL OUTFITTING)					DATE	
ACTIVITY (Name, Location, UIC) NAVAL AIR REWORK FACILITY, JACKSONVILLE, FLORIDA					9 Oct 1984	
PROJECT TITLE MATERIALS LABORATORY					UIC: N60201	
					PROJECT NUMBER 414	MCN FY 85
					CONST BOD 86	
COG SYMBOL AND FED. STOCK NO. OR OTHER SOURCE	ITEM/EQUIPMENT DESCRIPTION	QUAN- TITY	UNIT OF ISSUE	UNIT PRICE	TOTAL COST	
	(Sum of 2A, 2B & 2C)					
3. <u>TECHNICAL EQUIPMENT</u>	None					
4. <u>TRAINING EQUIPMENT</u>	None					
5. <u>EQUIPMENT ON HAND</u>	None					
6. <u>OTHER EXPENSES</u>	Non-Technical Equipment (Funded by NAVSUPSYSCOM)					
	...Transportation-				959.15	
	Furniture/Furnishings			(301.08)		
	Miscellaneous			(658.07)		
	TOTAL OTHER EXPENSES				959.15	
7. <u>COST SUMMARY</u>	Non-Technical Equipment Funded by NAVFACENGCOM:				23,978.73	
	...Furniture/Furnishings Items			(6,281.85)		
	Contingency - 5%			(314.09)		
	Escalation (4.8x4.5x4.2)			(931.07)		
				(7,527.01)		
	...Miscellaneous			(13,769.73)		
	Contingency - 5%			(688.49)		
	Escalation (4.8x4.5x4.2)			(1,993.50)		
				(16,451.72)		
	...Investment			(None)		
	<u>Technical Equipment</u>				None	
	<u>Training Equipment</u>				None	
	<u>Equipment on Hand</u>			(None)		
	<u>Other Expenses</u> Funded by NAVSUPSYSCOM:					
	...Transportation - Non-Technical Equipment				959.15	
	TOTAL COSTS				24,937.88	
	TOTAL EQUIPMENT PROVIDED FROM OTHER APPROPRIATIONS (Transfer to Block 9 of DD Form 1391)				24,950.00	

Figure 4
Example Collateral Equipment List Continuation

Figure 4
Example Collateral Equipment List Continuation
14.01-18

5.6 Interior Signage. Signage shall be designed as an overall building and site system to be furnished and installed under the construction contract. Economy, flexibility, ease of installation and maintenance are important considerations of signage design. The system shall inhibit vandalism but be flexible enough to enable the addition or deletion of information. An easily read letter-form such as Helvetica Medium shall be used.

a) Regulatory signage prohibits certain activity; for example, "No Smoking" or "No Entry." Many safety signs are required by regulation.

b) Identification signage identifies a building or function by name and number and may include the building operating hours or other information. Identification signage is necessary for room names and numbers and to identify such areas as toilets, phones, housekeeping activities, and stairs.

c) Directional signage directs personnel to different areas, departments, and functions of a building.

d) Informational signage provides initial orientation and guidance for facility users. An activity locator sign includes a building plan and identifies building spaces, key activities and personnel, and exits and provisions for the physically handicapped. A building directory shall be clearly visible to visitors as they enter the building. A portrait gallery of leaders shall be provided, when appropriate, to display the photographs of the President of the United States, the Secretary of Defense, the Secretary of the Navy, the Commanding Officer of the activity, and other leaders.

e) A signage manual shall be prepared to instruct the activity in maintenance of the signage system. In addition, provide specialized equipment and materials necessary for maintenance of the signage system.

f) Notice/bulletin boards help control clutter and readily accommodate changing information. They shall be provided throughout the building wherever they will be most useful.

g) Wall graphics may incorporate floor numbers, directional indicators, insignia, and other desirable information. When properly designed, they can be effective in enhancing spaces and producing interest in large rooms or circulation spaces.

5.7 Furniture Selection. Furniture selection criteria shall include: function, anthropometric considerations, moveability, adjustability, maintenance, durability, comfort, and cost. A clear relationship between the furniture finishes and the building finishes shall be evident. Similar attention shall be given to the selection of finishes for equipment.

5.8 Furniture Placement Plans. A Furniture Placement Plan shall be prepared for each room within the project to receive furnishings. Repetitive rooms, however, may be represented by a single furniture placement plan. Use a minimum scale of 1/8 inch equals one foot. Equipment and built-in furniture must be easily distinguishable from items of moveable furniture and major accessories. Each room shown on the placement plans shall have a room name and number and a legend identifying all items. Each furniture item shall also be keyed by letter or symbol to the Procurement Data Sheet. Figure 5 illustrates one method of meeting the above requirements.

FURNITURE/EQUIPMENT PLACEMENT SHEET

Place this list on the door or wall of the room indicated below

NOTE: See floor plan section C

PROJECT TITLE: Academic Instruction Facility
 Naval Training Center
 Orlando, Florida
 Const. Cont. N62467-79-C-0670

ROOM NUMBER/TITLE: Room 122

ROOM FINISH COLORS	Base Wall: Off White Accent Wall: None	Floor: Rust Carpet	Ceiling: White Acoustical Tile
quantity	code #	stock #	description (manufacturer, item, model #)
1	7	384-2	WASTEBASKET: Rubbermaid #2823
1	84	7195-00-004-0652	COSTUMER: GSA
1	70	NIS-F-4076	STORAGE CABINET: w/refrigerator Cervitor #CS 60-48
1	73	184-15	TABLE: Conference, 30" x 72" Howe #1360V
6	4	184-14	CHAIR: Stacking, upholstered American Seating #8710
2	14	270-3	CHAIR: Lounge, upholstered Davis #G 6860
1	16	270-3	SOFA: Three seat, upholstered Davis #HG 6800
2	29	7110-01-056-1980	TABLE: End, 30" square Barton

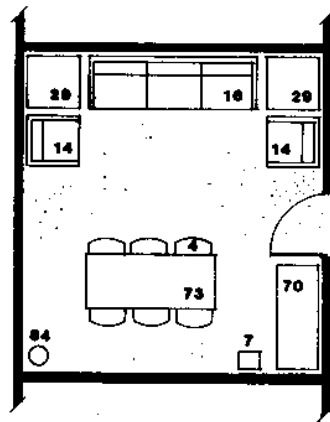


Figure 5
 Example Placement Sheet

Figure 5
Example Placement Sheet

14.01-20

5.9 Procurement Data Sheets. Ordering information shall be provided on Procurement Data Sheets in the interior design submittals (see Subparagraph 5.3.2.2) to facilitate purchasing. The ordering information must be readily understood by the user's supply personnel. Furthermore, location and placement instructions shall be provided in a format that can be readily understood by the user who will be responsible for component placement and utilization after delivery. A Procurement Data Sheet similar to Figure 6 or Figure 7 shall be provided for each item and shall contain the following information:

- a) Project title, user's geographical location, date, construction contract number;
- b) Manufacturer's descriptive name and model number;
- c) Description of item to be purchased;
- d) Dimensions;
- e) Finishes/fabrics;
- f) Plan code (from Furniture Placement Plan);
- g) Cost estimate (quantity, unit cost, extended cost);
- h) Source (manufacturer's name, address, and telephone number);
- i) National stock number/special item number;
- j) GSA contract number/contract expiration date;
- k) Furniture installation location (floor number, zone number, room number);
- l) Illustration of item.

5.10 Color Boards. Color Boards showing actual color and finish samples of all building structural finishes shall be provided for all projects. Color Boards shall be coded and cross-referenced to the contract documents to facilitate review of color/finish/signage schedules.

Approved Color Boards shall be forwarded to the Resident Officer in Charge of Construction (ROICC) for use in on-site inspection and approval of materials and finishes during construction.

5.11 Brochures. Brochures shall be developed for all projects. The brochure, similar to Figure 8, shall present the interior design along with the structural finishes. Brochures shall have identifying marks, letters, and symbols for cross-referencing plans to furniture and equipment. The Brochure shall be submitted in hard-cover, three-ring binders of nominal 8-1/2 x 11 inch size. To prevent duplication of effort, all presentation material shall be prepared in modules which fit into the Brochure. Brochures shall contain:

- a) A design concept narrative as needed to explain fully the interior design concepts;
- b) Color boards;
- c) Catalog cuts of furniture including actual samples of upholstery fabrics and furniture finishes;
- d) Signage/graphics concepts in a form that adequately conveys the type, size, color and location of the proposed system;
- e) Procurement data sheets giving sources of procurement, estimated costs, and quantities;

PROCUREMENT DATA SHEET

PAGE: 5

PROJECT TITLE:

Academic Instruction Facility (P-101)
Naval Training Center
Orlando, Florida

DATE: 10 January 1985

Const. Cont. N62467-85-C-0670

SOURCE:

Arcadia Chair Company, Inc.
15610 South Main Street
Gardena, California 90248
(213) 770-4353

FSC GROUP:

71 Part III Section H

CONTRACT NO:

GS-00F-76188

EXPIRES:

31 Jan 1988

ITEM NAME:

Desk Chair

PLAN CODE:

C

DESCRIPTION:

Special Item Number: 496-6

Model Number: 1420-SH

Size: 26" wide x 27" deep x 32-1/2" high

Upholstery: 2F/215 Blue, Grade 2

Base: Walnut



LOCATION:

1 ea: Rm 124, Office

TOTAL QUANTITY: 1 EA

UNIT PRICE: 313.00

TOTAL PRICE: 313.00

NAVAL FACILITIES ENGINEERING COMMAND
P.O. BOX 10068 CHARLESTON, SC 29411
803-743-0341 AUTOVON 794-0341


Figure 6
Example Procurement Data Sheet

Figure 6
Example Procurement Data Sheet

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MARINE CORPS HISTORICAL CENTER
WASHINGTON NAVY YARD, WASHINGTON, D.C.

INTERIOR DESIGN: PROCUREMENT DATA SHEET

ITEM NAME SECRETARIAL CHAIR		ITEM NO. F6	
SOURCE GSA REGIONAL OFFICE			
CONTRACT NO.			
FEDERAL STOCK NO. 7110-00-119-4507			
FSC GROUP	PART	SECTION	
DESCRIPTION Secretarial chair with non-tilting seat, tilt back, adjustable seat and chair back, with casters, without arms, tufted upholstery (red)			
LOCATION	QUANTITY	UNIT COST	TOTAL COST
SECOND LEVEL (Rooms 3,4,10)	5	\$80.00	\$400.00
THIRD LEVEL (Rooms 2,3,4)	5	\$80.00	\$400.00
TOTAL	10		\$800.00
PROJECT NO. N62477-74-C-0098		DATE. March 10, 1976	

THE POTOMAC GROUP

Architects 1750 NEW YORK AVENUE, N.W., WASHINGTON, D.C. 20005

Figure 7
Example Procurement Data Sheet

Figure 7

EXAMPLE OF INTERIOR DESIGN BROCHURE

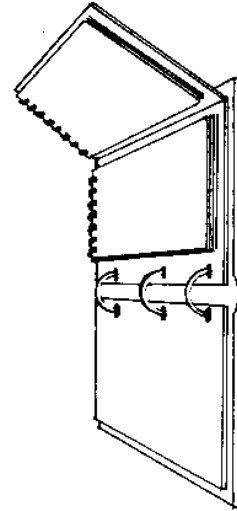
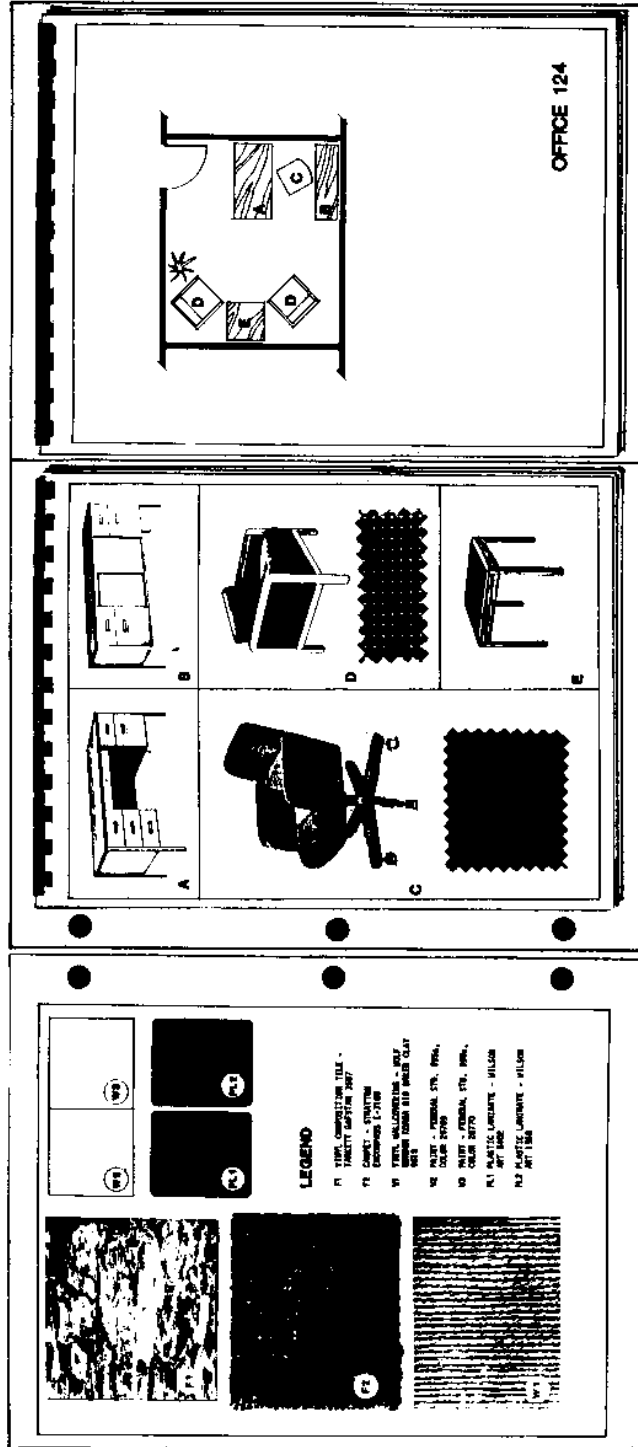


Figure 8
Example Interior Design Brochure

Figure 8
Example Interior Design Brochure

14.01-24

- f) Furniture /equipment placement plans for all rooms/spaces;
- g) Color reproductions of interior graphics/art work such as murals, pictures, and other wall-hung art;
- h) Room color/finish schedules of structural finishes;
- i) Sketches as required to show perspective views and interior elevations of significant spaces and interior design concepts;
- j) Waivers, performance specifications, and justification for other than full and open procurement.

5.12 Waivers/Performance Specifications. Selections from non-Government sources shall be held to a minimum. When the designer must use a non-Government source or a restricted Government source, justification for waivers or for other than full and open procurement purchase must be provided. Section 6 gives guidance on open market procurement and preparation of waiver justifications and performance specifications.

5.13 Follow-up/Supervision/Evaluation. The Interior Design Brochure is submitted to the user. The user schedules procurement to assure delivery near completion of construction. Delivery and placement of the items are extremely important considerations to assure proper execution of the interior design.

The designer may be called on to supervise installation, to assist in evaluating bids and substitutions, to inspect quality, and to generally assist in installation problems. Interior design services shall include, when required, review and approval of contractor submittals of building finishes and review of post-design changes to the construction documents throughout the construction, furnishings procurement, and installation processes.

After occupancy, the designer may participate as a member of the post occupancy evaluation team to evaluate space relationships, building finishes, furnishings, graphics system, and the overall aesthetic quality of the completed facilities.

Section 6: SUPPLY SOURCES

6.1 Programs and Publications. The interior design can be successful only if the required furniture is procured and installed as intended. It is, therefore, essential that the designer become thoroughly familiar with the system under which Government procurement of furniture is accomplished. Figure 9 shows these sources of supply. Sources for publications, schedules, and catalogs are listed in Appendix A.

6.2 General Services Administration (GSA), Office of Federal Supply Services (FSS). The FSS is the primary supplier of personal property for Federal agencies through several major programs. Three programs: the Stock Program, the Federal Supply Schedule Program, and the Special Order Program offer the supply sources from which a majority of furniture will be selected by the Navy designer.

6.2.1 Stock Program. This program is used for procurement of a variety of common-use items for general office areas and quarters. The GSA Supply Catalog provides the source of information for specifying from the Stock Program. The GSA Catalog contains three sections of interest to the designer: the Furniture Section, containing office furniture; the Industrial Products Section, containing such items as clocks, mattress pads and covers, and pillow protectors; and the Office Products Section, containing miscellaneous office items such as waste baskets, national flag sets, easels, and ash trays.

6.2.2 GSA Federal Supply Schedules Program. GSA publishes the Federal Supply Schedules to provide the designer with ordering data for a variety of commercial items at price discounts associated with volume buying. The Federal Supply Schedules contain GSA contracts at fixed prices for specific periods of time. The schedules are mandatory to the extent specified in each schedule. There are four types of schedules: Negotiated Commercial Items Schedules, Competitively Awarded Schedules, New Item Introductory Schedules, and Maintenance and Repair Schedules.

6.2.2.1 Negotiated Commercial Items Schedules. These schedules were formerly called Multiple Award Schedules. They provide furniture items available from a variety of manufacturers, all supplying the same generic item. These schedules are negotiated by GSA for a specified time with products from several suppliers being made available to provide selectivity among items to meet varying needs. Each schedule contains terms and conditions common to all contracts listed as well as the addresses and telephone numbers of all schedule contractors. Upon request, Negotiated Commercial Items Schedule contractors distribute catalogs/price lists with complete specification and ordering information. Systems Furniture, a type of Negotiated Commercial Items Schedule, is considered separately due to its unique character (see Sub-subparagraph 6.2.2.5).

6.2.2.2 Competitively Awarded Schedules. These schedules were formerly called Single Award Schedules. They provide items at a stated price for delivery to a particular geographical area. These contract items are normally

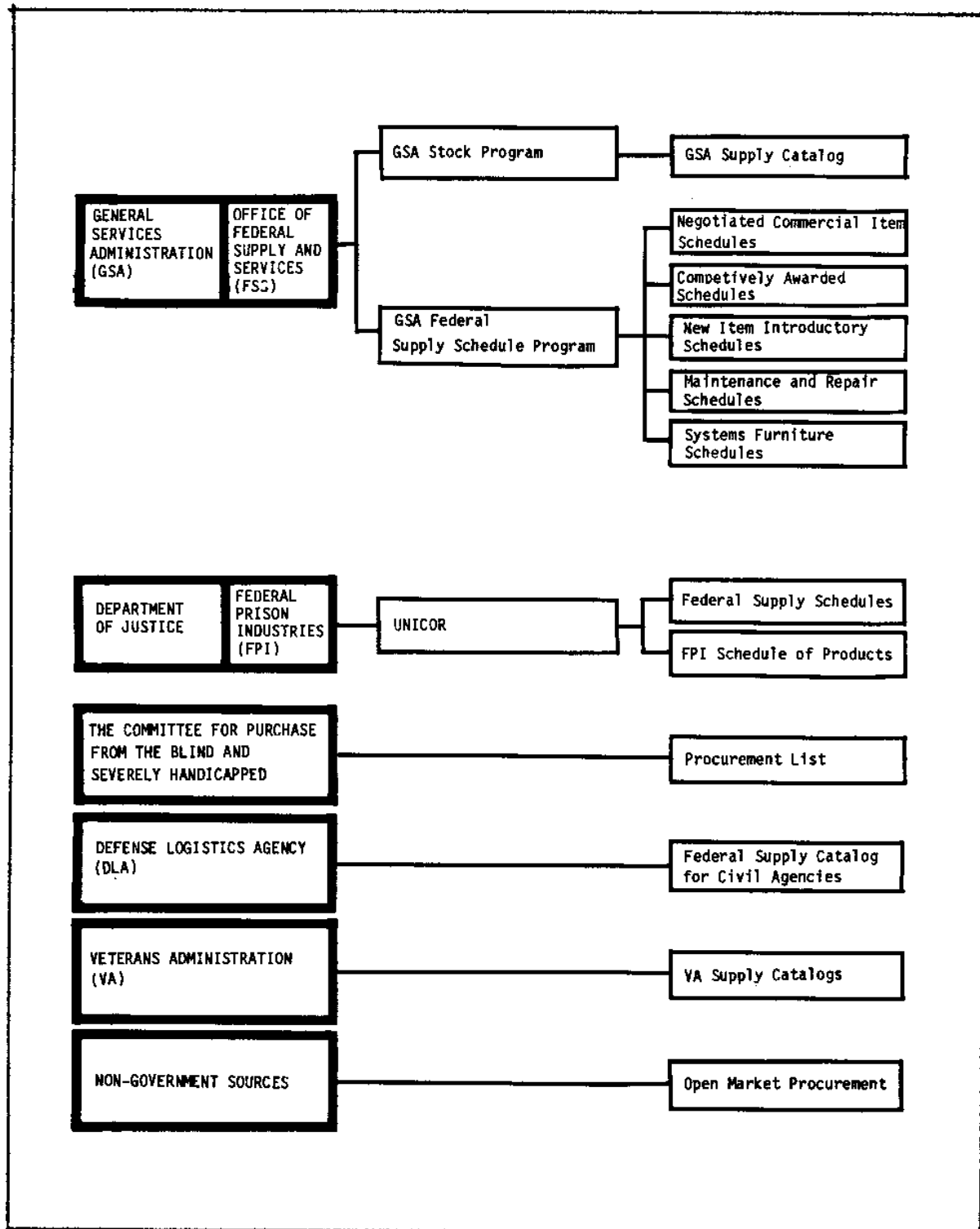


Figure 9
Sources of Supply

Figure 9
Sources of Supply

14.01-28

manufactured to a Federal specification or standard and are awarded on a competitive basis each year. Some examples of items specified from Competitively Awarded Schedules are lamps and carpeting.

6.2.2.3 New Item Introductory Schedule (NIIS). This schedule provides the means for testing demand for new items not presently provided under any of GSA's supply programs. If sufficient demand for an item is generated, it may be included in a regular procurement schedule.

6.2.2.4 Maintenance and Repair Schedules. In addition to the schedules for purchase of new items, the Office of Federal Supply and Services contracts for maintenance, repair, and rehabilitation of furniture through competitively awarded service contracts. These maintenance and repair schedules are a mandatory source for furniture rehabilitation.

6.2.2.5 Systems Furniture Schedule. This schedule is a restricted Negotiated Commercial Items Schedule which involves special procurement procedures. Federal Property Management Regulations (FPMR) Temporary Regulation E-81 sets forth the general management policies related to the acquisition of systems furniture. Detailed procedures are covered in GSA Bulletin FPMR E-210. Systems furniture may be purchased by executive agencies only when its use (in lieu of conventional office furniture) results in the most cost effective utilization of Government-controlled office space. Authorization to use the Systems Furniture Schedule must be authorized by GSA after approval by the Navy.

6.2.3 Special Order Program. This program, formerly called Non-Stock, provides procurement support services to allow agencies to obtain items not included in the Stock or Schedules Program. This program includes contemporary and general office furniture and a group of miscellaneous furnishings for offices. Many of the items once available from GSA warehouses have been transferred to the Special Order Program. In this program, items are requisitioned and billed through GSA but orders are delivered directly to the customer rather than shipped from GSA warehouses. As with the Stock Program, the GSA Supply Catalog provides the source of supply information for specifying from the Special Order Program.

6.2.4 GSA Supply Catalog. The GSA Supply Catalog is a comprehensive source of information on the Federal Supply Schedules Program and identifies the furniture items and services available. It explains how to use schedules; contains indexes, in alphabetic, numeric, national stock number (NSN), and schedule identifier formats; details step-by-step procurement instructions; and provides information and sources of information on many other aspects of dealing with the FSS.

6.3 Federal Prison Industries (FPI). FPI is a wholly owned Government corporation which has adopted the trade name UNICOR. FPI products are offered both through the Federal Supply Schedules and their own catalogs. Typical items the designer will find through FPI include the military specification bunk bed and accessories, steel shelving, mattresses, and several lines of office furniture. Federal procurement regulations identify Federal Prison Industries as a mandatory source for all Federal departments and agencies for products which meet the requirements of the ordering office.

6.4 The Committee for Purchase from the Blind and Other Severely Handicapped. The Committee for Purchase from the Blind and Other Severely Handicapped is a mandatory source of supply. Although the Committee publishes the Procurement List, the Navy designer can obtain this document through GSA's Centralized Mailing Lists Services. In most cases the Procurement List will show GSA, Defense Logistics Agency, or Federal Prison Industries as the source of supply since these agencies buy directly from the Committee and stock these commodities for resale and distribution.

6.5 Defense Logistics Agency (DLA) and Veterans Administration (VA). The DLA is the principal supply support activity for the Department of Defense. DLA and other principal supply support activities, GSA and VA, have been working closely to eliminate avoidable overlap and duplication in their supply systems. For this reason, DLA has the responsibility for management of items such as mattresses and pillows, and VA has the responsibility for some medical furniture. DLA items can be found in the Federal Supply Catalog for Civil Agencies. VA manages a series of schedules covering medical and subsistence items and these may be obtained through GSA's Centralized Mailing Lists Services.

6.6 Non-Government Sources. Selections from non-Government sources shall be held to a minimum. When an item is not available from an approved Government source, the designer shall prepare performance specifications for the item in question in the form of salient characteristics for open market procurement. If other than full and open competition is involved, approval by the contracting officer must be obtained in advance of procurement. If items similar to products on Government schedules are required, a waiver of the schedule must be obtained. In all of the above instances, justification and information shall be provided to the procurement agency via the Naval Facilities Engineering Command Field Division.

6.6.1 Open Market Procurement. When an item is not available from an approved Government source, specific data are required in accordance with the Federal Acquisition Regulations (FAR) and Department of Defense Supplement to the Federal Acquisition Regulation (DOD/FAR). These data generally include salient physical, functional, or other characteristics of the product required in addition to other information. The product data normally include:

- a) Complete generic identification of the item required;
- b) Model, make, or catalog number for each brand name product referenced and identification of the commercial catalog in which it appears;
- c) Name and address of manufacturer, producer, or distributor of each brand name product referenced;
- d) A photograph or drawing of the item.

Figure 10 is an example of open market procurement data information.

SALIENT CHARACTERISTICS FOR DROP DESK WALL UNIT

DIMENSIONS: Unit shall be 30 inches wide by 18-20 inches deep by 75-81 inches high.

SHELF: Full depth adjustable shelf, with high pressure plastic laminate, top, bottom, and all four edges.

LIGHT FIXTURE: UL rated 15-watt task fluorescent fixture complete with lamp mounted behind valance with a switch, convenience outlet, and a grounded 3-wire, 8-foot cord.

EDGING: All exposed edges to be either (1) hardwood to match plastic laminate surface or (2) mechanically bonded vinyl "T" molding, color to match plastic laminate surfaces.

DRAWERS: Three full depth drawers per unit with standard ball-bearing slides with positive stops.

CORE MATERIAL: 45-pound density, 3/4-inch thick particle board.

DROP LID: Drop lid door shall be high pressure plastic both sides with a hidden full-length piano hinge when the drop lid is closed. The hinge shall allow the top surface of the drop lid to form a horizontal desk surface when the lid is open. The lid shall have friction adjustment to allow the lid to drop smoothly at a controlled rate. The lid shall have magnetic catches with a pull of 6-8 pounds.

FINISH & COLOR: All exposed and interior surfaces including back and top to be high pressure plastic laminate equal to Wilson Art 7806-15, Textolite 9740, or Nevamar N-8-73 (light oak).

EXIT HOLES: Two grommated exit holes (1-1/2 inches each hole) in back panel for audio cord outlets.

ASSEMBLY: Unit shall be shipped fully assembled and will be completely free standing with four adjustable leveling glides for case leveling of at least one inch.

SKETCH:



Figure 10
Example Open Market/Salient Characteristics

6.6.2 Other Than Full and Open Procurement (formerly Sole source): If the item required is not available from a Government source and furthermore is available from one source only, information must be furnished to the procurement agency in accordance with the FAR and DOD/FAR. The required data for this procedure are extensive and data submittals require high-level approval (see DOD/FAR, Part 6).

6.6.3 Waivers from SA schedules. According to the DOD/FAR Regulations, if items similar to schedule products will not serve the required functional end-use, a waiver of the schedule must be obtained. Request for waiver shall be submitted to GSA via the Naval Facilities Engineering Command Field Division and shall include the following:

- a) A complete description including cost and an illustration, drawing, or brochure showing the characteristics of construction and explanation of the operation of the item;

- b) Comparison of price and pertinent technical differences between the item required and the similar GSA item, addressing inadequacies of the GSA item in performing required functions and the advantages of the item requested such as technical, economic, or other;

- c) Quantity required. If demand is recurrent, estimate annual usage; if nonrecurrent or unpredictable, so state.

6.7 Use and Procurement Restrictions.

6.7.1 Maximum Order Limitation. The Maximum Order Limitation (MOL) is quantitative ceiling on orders placed under the Federal Supply Schedules. The MOL varies from schedule to schedule and may vary from contract to contract. If an order exceeds the MOL, the order must be sent to the Furniture Commodity Center, Washington, DC, for Definite Quantity Procurement. If the MOL is exceeded on an item from a Negotiated Commercial Items Schedule, the designer must provide GSA with a purchase description setting forth the salient features of the item. GSA will use this purchase description to request bids and to make an evaluation as to the lowest bidder who meets the minimum requirements.

6.7.2 Small Requirements. A Quantitative Minimum Order Level (MO) is stipulated for each schedule contract; therefore, contractors are not obligated to accept orders below this minimum amount. Refer to the "Ordering Instructions" section of each schedule for appropriate details.

6.7.3 Foreign Purchases. Section 25 of the DOD/FAR includes restrictions and procedures governing procurement of foreign-made items. With some exceptions the Buy American Act (BA) requires that only domestic end-products shall be acquired for public use in the United States. The designer is required to evaluate foreign-made items in accordance with the Buy American Act or the Balance of Payments evaluation procedures as appropriate if the following conditions exist:

- a) Both foreign and domestic products are available through the Negotiated Commercial Items Schedules and are marked (BA) on the schedules;

- b) Both products will meet the requirements of a particular job. When the Negotiated Commercial Items Schedule is not marked (BA) the Buy American Act and the Balance of Payments Program evaluation is waived.

6.7.4 Negotiated Commercial Items Schedules Justification. DOD/FAR Paragraph 9.405-1 requires that, when selectivity exists among items, documentation may be required by the procurement agency to provide justification for purchase of other than the lowest delivered price item. The designer is tasked with reviewing all available contract sources, evaluating the items, and selecting the lowest cost item which meets the requirements of each project to support integrated interior design.

6.7.5 Use Standards. Federal Property Management Regulations, Subpart 101-25.3 prescribe use standards for some items of personal property including office furniture, furnishings, and equipment. Promulgation of agency-specific standards for office furniture is assigned to the individual Federal agencies.

Detailed use standards have not been developed by DOD, except for the National Capital Region (NCR). Office furniture projects in the NCR shall conform to Department of Defense Instruction 5305.6. Office furniture for other projects shall be specified in accordance with the guidance provided in GSA Bulletin FPMR E-207, Establishment of Use Standards for Office Furniture.

APPENDIX A

SUPPLY SOURCES

1. GENERAL SERVICES ADMINISTRATION (GSA) CENTRALIZED MAILING LIST SERVICES. Publications, schedules and catalogs referenced in Section 6 are listed below:

GSA Supply Catalog
GSA Federal Supply Schedules
GSA New Item Introductory Schedule
Procurement List (Committee for Purchase from the Blind)
Veterans Administration schedules
Federal Prison Industries Schedules (Office Furniture)

These items are available from:

General Services Administration (8 BRC-9)
Denver Federal Center, Building 41
Centralized Mailing Lists Services
Denver, CO 80225

Telephone: Federal Telecommunications System (FTS) 776-7401
Commercial: 303-236-7401

2. FEDERAL PRISON INDUSTRIES (FPI) SCHEDULE OF PRODUCTS.

For military bunk beds, steel shelving, lockers, cabinets, and office furniture, obtain the Schedule of Products Furniture and Storage Shelving Schedule from:

UNICOR
Federal Prison Industries, Inc.
Metal and Wood Products Division
320 First Street, NW
Washington, DC 20534

Telephone: FTS 724-3006 Commercial: 202-724-3006

For FPI mattresses, obtain the Schedule of Products Mattress Schedule from:

UNICOR
Federal Prison Industries, Inc.
Textile and Leather Products Division
320 First Street, NW
Washington, DC 20534

Telephone: FTS 272-6464 Commercial: 202-272-6464

3. DEFENSE LOGISTICS AGENCY (DLA).

Obtain Federal SUPPLY Catalog for Civil Agencies from:

Defense Logistics Services Center (Attn: DLSC-APPP)
Battle Creek, MI 49016

Telephone: Autovon (DOD only) 369-6663
Commercial 616-962-6511 Extension 6663

REFERENCES

Defense Logistics Agency Federal Supply Catalog for Civil Agencies available from Defense Logistics Services center, Attention: DLSC-APLP, Battle Creek, MI 49016.

Department of Defense Construction Criteria Manual, DOD 4270.1-M available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

Department of Defense Instruction 4165.43. Provisions of Furnishings in Personnel Quarters available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

Department of Defense Instruction 5305.6, Department of Defense Office Furniture Standard for the National Capital Region available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

Department of Defense, OASD Memorandum of 13 Nov 1984, Subject Joint Criteria for Child Care Centers available from the Office of the Assistant Secretary for Force Management and Personnel, attention Correspondence and Control Division, Room 3E759 Pentagon, Washington, DC 20301.

Federal Acquisition Regulation and Department of Defense Federal Acquisition Regulation Supplement available from:

Naval Publications and Forms Center, 5801 Tabor Avenue,
Philadelphia, PA 19120. (Navy activities)

U. S. Government Printing Office, Superintendent of Documents,
Washington, DC 20402. (Commercial organizations)

Federal Prison Industries Schedule of Products available from UNICOR, Federal Prison Industries, Inc., Marketing Division, 320 First Street, NW, Washington, DC 20534.

Federal Property Management Regulations available from:

Naval Publications and Forms Center, 5801 Tabor Avenue,
Philadelphia, PA 19120. (Navy activities)

General Services Administration, Attention: Business Service
Center, 7th and D Street, SW, Washington, DC 20407. (Navy activities and
commercial organizations)

Federal Standard 595a, Colors is available from:

Naval Publications and Forms Center, 5801 Tabor Avenue,
Philadelphia, PA 19120. (Navy activities)

U. S. Government Printing Office, Superintendent of Documents,
Washington, DC 20402. (Commercial organizations)

General Services Administration:

Federal Supply Schedules
Maintenance and Repair Schedules
Supply Catalog

Available from General Services Administration (8 BRC-9), Denver Federal Center, Building 41, Centralized Mailing Lists Services, Denver, CO 80225.

General Services Administration Bulletin Federal Property Management Regulation E-207 and E-210 are available from General Services Administration, Attention: Business Service Center, 7th & D Street, SW, Washington, DC 20407.

Military Handbook, MIL-HDBK-1008. Fire Protection for Facilities Engineering, Design, and Construction, April 1985, available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120

Military Specifications:

MIL-B-15228F	Bed, Bunk, Steel, Round Tube, Single and Double Deck (Convertible Type)
MIL-B-28635B(YD)	Bookshelf for Bunk Bed
MIL-B-28644	Bed, Bunk, Steel, Square Tube, with End Panels, Single and Double Deck
MIL-C-28580(1)(YD)	Cabinet, storage, Wardrobe, Three Drawer
MIL-D-28637A(YD)	Desk, Flat Top with Bookshelf
MIL-L-28583(YD)	Light, Bed, Flexible Arm, Heavy Duty
MIL-P-28636A(YD)	Panel for Bunk Bed
MIL-W-28581A(YD)	Wardrobes, Clothing, Composite Wood and Metal

NAVFACENGCOM Design Manuals and P-Publications:

DM-1.02	Materials and Buildings Components
DM-1.03	Architectural Acoustics
DM-14.02	Carpet Selection Guide
DM-33.01	Medical Facilities Preliminary Design Considerations
DM-33.02	Naval Hospitals Design and Construction
DM-33.03	Medical Clinics and Dental Clinics Design and Construction Criteria
DM-34	Administrative Facilities
DM-36.01	Unaccompanied Personnel Housing
DM-36.02	Unaccompanied Enlisted Quarters
DM-36.03	Unaccompanied Officers Quarters
DM-37.03	Outdoor Sports and Recreational Facilities
DM-37.05	Family Service Centers
DM-37.06	Chapels and Religious Educational Facilities

DM-50	NAVFAC Index to Engineering and Design Criteria
P-34	Engineering and Design Criteria for Navy Facilities
P-309	Color for Naval Shore Facilities
F-442	Economic Analysis Handbook

NAFACENGCOM Guide Specifications:

NFGS-01400	Contractor Quality Control System
NFGS-01401	Contractor Inspection System
NFGS-04200	Unit Masonry
NFGS-04250	Ceramic Glazed Structural Clay Facing Tile and Prefaced Concrete Masonry Units
NFGS-06200	Finish Carpentry
NFGS-08110	Hollow Metal Doors and Frames
NFGS-08120	Aluminum Doors and Frames
TS-08210	Wood Doors
NFGS-08371	Aluminum Sliding Glass Doors
TS-08510	Steel Windows
NFGS-08520	Aluminum Windows
TS-08610	Wood Windows
NFGS-08710	Finish Hardware
NFGS-0880	Glazing
NFGS-08900	Glazed Curtain Wall System
NFGS-09150	Plastering and Stuccoing
NFGS-09215	Veneer Plaster
NFGS-09250	Gypsum Board
NFGS-09310	Ceramic Tile, Quarry Tile, and Paver tile
NFGS-09331	Chemical -Resistant Quarry Tile Flooring
NFGS-09411	Terrazzo, Bonded to Concrete
NFGS-09500	Acoustical Treatment
NFGS-09561	Gymnasium-Type Hardwood Strip Flooring Systems
NFGS-09563	Portable (Demountable) Wood Flooring
NFGS-09570	Wood Parquet Flooring
NFGS-09650	Resilient Flooring
TS-09661	Vinyl Composition Tile on Concrete
NFGS-09666	Institutional Sheet Vinyl Flooring
TS-09670	Fluid Applied Resilient (Resinous) Flooring
NFGS-09682	Carpet
NFGS-09690	Carpet Tile
NFGS-09815	High-Build Glaze Coatings
NFGS-09910	Painting of Buildings (Field Painting)
NFGS-09951	Vinyl -Coated Wall Covering
NFGS-10152	Hospital Cubicle Track
NFGS-10162	Toilet Partitions
NFGS-10270	Access Flooring
NFGS-10440	Signs
TS-10623	Accordion Folding Partitions
NFGS-10800	Toilet and Bath Accessories
NFGS-11701	Casework, Metal And Wood, (Medical and Dental)
NFGS-12322	Wardrobes
NFGS-12331	Prefabricated Vanities

NFGS-12332	Wardrobe Storage Cabinets
TS-12391	Kitchen Cabinets (and Vanity Cabinets)
NFGB-12510	Blinds, Venetian (and Audio Visual)
NFGS-12540	Draperies
NFGS-12711	Theater Seating

NAVFACENGCOM INSTRUCTIONS:

NAVFAC Instruction 11010.14	Project Engineering Documentation (PED) for Proposed Military Construction Projects.
NAVFAC Instruction 11010.32	Preparation of Supporting Documents for MILCON Program Projects.
NAVFAC Instruction 11010.74	Collateral Equipment Required to Initially Outfit Military Construction Navy and Military Construction, Naval Reserve Projects.
NAVFAC Instruction 11012.119	Preparation of Concept Plans and Final Working Drawings and Specifications for Medical/Dental Facilities.

Military Specifications and NAVFAC Design Manuals, P-Publications, Guide Specifications, and Instructions are available to all Navy activities, free of charge, from the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120; telephone: Autovon (DOD only): 442-3321; Commercial: (215) 697-3321.

Commercial organizations may procure Design Manuals and P-Publications from the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402.

In addition to the sources referenced above, the majority of Navy criteria may be obtained from select commercial sources as listed in NAVFAC P-34 or from the Naval Facilities Engineering Command Regional Engineering Field Divisions listed below:

Commander (Code 406)
Atlantic Division,
Naval Facilities Engineering Command
Bldg. N26, Norfolk, VA 23511
Telephone: (804) 444-9906

Commanding Officer (Code 406)
Chesapeake Division,
Naval Facilities Engineering Command
Washington Navy Yard, Building 212, Washington, DC 20374
Telephone: (202) 433-3314

Commanding Officer (Code 406)
Northern Division,
Naval Facilities Engineering Command
Bldg. 77 Low, U. S. Naval Base, Philadelphia, PA 19112
Telephone: (215) 897-6090

Commander (Code 406)
Pacific Division,
Naval Facilities Engineering Command
Pearl Harbor, HI 96860
Telephone: (808) 471-8436

Commanding Officer (Code 406)
Southern Division,
Naval Facilities Engineering Command
P. O. Box 10068
Charleston, SC 29411-0068
Telephone: (803) 743-0445

Commander (Code 406)
Western Division,
Naval Facilities Engineering Command
P. O. Box 727
San Bruno, CA 94066
Telephone: (415) 971-6600

Navy Comptroller Manual, Volume 7, Budgeting available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

OPNAV Instruction 11101.32 Provisions of Furnishings for Family and Bachelor Housing available from Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

Procurement List From the Committee for Purchase From the Blind and Other Severely Handicapped available from General Services Administration (8 BRC-9), Denver Federal Center, Building 41, Centralized Mailing Lists Services, Denver, CO 80225.

Veterans Administration Schedules available from General Services Administration (8 BRC-9), Denver Federal Center, Building 41, Centralized Mailing Lists Services, Denver, CO 80225.

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